

## **REMARKS**

### **Formal Matters**

Claims 69-87 were examined and rejected.

Claims 69-88 are pending.

Claims 69, 72, 76 and 86 are amended. Claim 88 is new. No new matter is added.

Reconsideration of this application is respectfully requested.

### **Rejections withdrawn**

Applicants acknowledge and appreciate the Examiner's decision to withdraw the rejections under 35 U.S.C. § 112, first paragraph (written description) and 35 U.S.C. § 112, second paragraph (indefiniteness).

### **Rejection of claims under 35 U.S.C. § 101**

New claims 69-87 are rejected under 35 U.S.C. § 101 as allegedly unsupported by a patentable utility. The Applicants respectfully traverse this rejection.

A claimed invention satisfies the requirements of 35 U.S.C. § 101 if it is supported by either a specific and substantial asserted utility or a well established utility.

Utility of the rejected claims is supported by the following facts:

- TDAG8 (SEQ ID NO:82) is preferentially expressed in organs that contain cells of the immune system, e.g., peripheral blood leukocytes, spleen and lymph node (see, e.g., Example 9 and Fig. 6).
- Activation of TDAG8 (e.g., by agonists such as ATP and ADP, as described in the subject application) leads to an increase in intracellular cAMP accumulation (see, e.g., Example 5 and Figs. 2A and 2B).
- Increased constitutive activity of TDAG8 leads to an increase in cAMP accumulation (see, e.g., Table G, Table I and Figs. 5A and 5B).

- Elevated cAMP accumulation in peripheral blood leukocytes is known to inhibit inflammation.<sup>1</sup>
- The role of ATP in mediating inflammation is known.<sup>2</sup>

In view of the fact that: a) TDAG8 is preferentially expressed in organs containing immune cells; b) activation of TDAG8 (e.g., by agonists such as ATP and ADP, as described in the subject application) leads to an increase in intracellular cAMP accumulation; c) elevated cAMP accumulation in peripheral blood leukocytes inhibits inflammation; and d) the role of ATP in mediating inflammation is known, it follows that the utility of TDAG8 would be readily apparent to one of skill in the art.

The Applicants believe that the facts set forth above support a patentable utility for the rejected claims. Indication of such is requested. Applicants prior arguments are consistent with the above, and are believed to still stand with equal force.

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<sup>1</sup> See, e.g., Moore et al (Clin. Exp. Immunol. 1995 101:387-389; Naik (Eur. J. Pharmacology 1984 104: 253-259); Deporter et al (Br. J. Pharmac. 1979 65: 163-165); Deporter (Br. J. Pharmac. 1977 60: 205-207); and Bonta (Prostaglandins 1981 22 95-103).

<sup>2</sup> See, e.g., Brake et al (Chemistry and Biology 1996 3: 229-232); Cronstein (J. Appl. Physiol. 1994 76: 5-13); and Daval (Pharmacol. Ther. 1996 71: 325-335).

**Rejection of claims under 35 U.S.C. § 112, first paragraph (utility)**

Claims 69-87 are rejected under 35 U.S.C. §112, first paragraph, because they are rejected under 35 U.S.C. §101. This rejection is applied to new claims 69-87.

The Applicants respectfully submit that this rejection should be withdrawn along with the §101 rejection for the reasons outlined above.

Withdrawal of this rejection is requested.

**Conclusion**

The Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at (650) 833-7723.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number AREN-007CON2.

Respectfully submitted,  
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